

Storm Surge Watch



Hurricane MARIA QuickLook Posted: 06:00 EDT 09/25/2017

NOAA and NOAA Partnership Stations Relative to the Storm Chesapeake Bay Bridge Tunnel, VA 9/29/2017 2 AM Duck, NC Oregon Inlet Marina, NC **USCG Station Hatteras, NC** 9/28/2017 2 AM Beaufort, NC Wrightsville Beach, NC Wilmington, NC 9/27/2017 2 AM Springmaid Pier, SC 9/26/2017 2 PM Oyster Landing, SC Charleston, SC 9/23/2017 2 AM 9/25/2017 2 PM 9/25/2017 5 AM Active Stations Extent TS Force Winds Extent Hurricane Force Winds

## Storm Analysis

As of 9/25/2017 06:00 EDT, water levels along the Atlantic coast from Springmaid Pier, SC to the entrance to Chesapeake Bay are slowly rising and range between 0.4 and 2.2 feet above normal tide levels. However some of the higher water level residuals across the South Carolina coast are coinciding with low tide.

Winds range from 10 to 20 knots with some gusts between 20 and 25 knots being measured across northern North Carolina. Barometric pressure is slowly falling across the region.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional real-time and historical inundation information for select stations affected by this storm, please see Coastal Inundation Dashboard.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst: PFF

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## SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

Hurricane Maria Advisory Number 37 NWS National Hurricane Center Miami FL AL152017 500 AM EDT Mon Sep 25 2017

...MARIA CONTINUES TO WEAKEN...

...TROPICAL STORM WARNING ISSUED FOR PORTIONS OF THE NORTH CAROLINA COAST...

# SUMMARY OF 500 AM EDT...0900 UTC...INFORMATION

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LOCATION...30.6N 73.0W

ABOUT 350 MI...560 KM SSE OF CAPE HATTERAS NORTH CAROLINA MAXIMUM SUSTAINED WINDS...80 MPH...130 KM/H PRESENT MOVEMENT...N OR 355 DEGREES AT 7 MPH...11 KM/H MINIMUM CENTRAL PRESSURE...957 MB...28.26 INCHES

WATCHES AND WARNINGS

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### CHANGES WITH THIS ADVISORY:

A Tropical Storm Warning has been issued for the North Carolina coast from Cape Lookout to Duck, including the Albemarle and Pamlico Sounds.

### SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Tropical Storm Warning is in effect for...

- \* Cape Lookout to Duck
- \* Albemarle and Pamlico Sounds

A Tropical Storm Watch is in effect for...

- \* North of Duck to the North Carolina/Virginia border
- \* North of Surf City to south of Cape Lookout

A Storm Surge Watch is in effect for...

\* Cape Lookout to Duck

Interests elsewhere along the Carolina and Mid-Atlantic coasts should monitor the progress of Maria.

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area within 36 hours.

A Tropical Storm Watch means that tropical storm conditions are possible within the watch area, generally within 48 hours.

A Storm Surge Watch means there is a possibility of life- threatening inundation, from rising water moving inland from the coastline, in the indicated locations during the next 48 hours. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov.

For storm information specific to your area, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office.

### **DISCUSSION AND 48-HOUR OUTLOOK**

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At 500 AM EDT (0900 UTC), the center of Hurricane Maria was located near latitude 30.6 North, longitude 73.0 West. Maria is moving toward the north near 7 mph (11 km/h), and this general motion with some decrease in forward speed is expected through Tuesday night. On the forecast track, the core of Maria will move well east of the southeast coast of the United States during the next day or so.

Reports from a NOAA Hurricane Hunter aircraft indicate that maximum sustained winds have decreased to near 80 mph (130 km/h) with higher gusts. Additional weakening is forecast during the next 48 hours, and Maria is expected to weaken to a tropical storm by Tuesday night.

Maria is a large hurricane. Hurricane-force winds extend outward up to 70 miles (110 km) mainly to the east of the center and tropical-storm-force winds extend outward up to 230 miles (370 km).

The minimum central pressure estimated from the NOAA Hurricane Hunter data is 957 mb (28.26 inches).

### HAZARDS AFFECTING LAND

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WIND: Tropical storm conditions are expected within the warning area beginning Tuesday. Tropical storm conditions are possible within the watch area beginning Tuesday.

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water is expected to reach the following heights above ground if the peak surge occurs at the time of high tide...

Cape Lookout to Duck including the sound side of the Outer Banks...2 to 4 ft

Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances. For information specific to your area, please see products issued by your local National Weather Service forecast office.

RAINFALL...Maria is expected to produce total rainfall accumulations of 1 to 2 inches over the Outer Banks of North Carolina through Wednesday.

SURF: Swells generated by Maria are increasing along portions of the southeastern United States coast and Bermuda and will be increasing along the Mid-Atlantic coast today. Swells also continue to affect Puerto Rico, the Virgin Islands, the northern coast of Hispaniola, the Turks and Caicos Islands, and the Bahamas. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office for more information.

### **NEXT ADVISORY**

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Next intermediate advisory at 800 AM EDT. Next complete advisory at 1100 AM EDT.

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Forecaster Beven

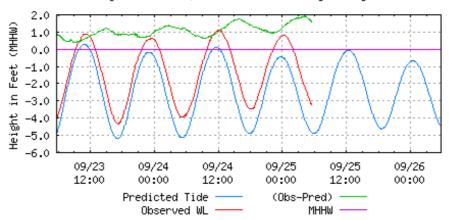
**NNNN** 

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Charleston, Cooper River Entrance - Water Level, Charleston, Cooper River Entrance - Winds, Charleston, Cooper River Entrance - Barometric, Oyster Landing (N Inlet Estuary) - Water Level, Springmaid Pier - Water Level, Springmaid Pier - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, Wilmington - Water Level, Beaufort - Water Level, Beaufort - Winds, Beaufort - Barometric, USCG Station Hatteras - Winds, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Water Lev

# NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC

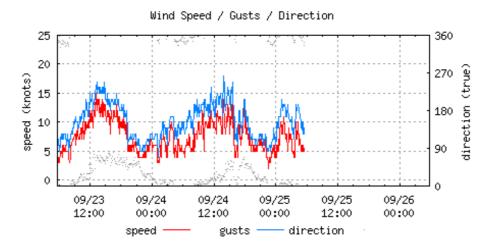
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -3.30 ft. Predicted: -4.85 ft. Residual: 1.55 ft. Historical Maximum Water Level: Sep 21 1989, 6.76 ft.

Next High Tide: 09/25/2017 12:21 (EDT), -0.07 ft.

# NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC



Last Observed Sample: 09/25/2017 05:36 (EDT) Wind Speed: 5 knots Gusts: 8 knots Direction: 345° T

# NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC

#### Barometric Pressure 1018 1017 Pressure (mb) 1016 1015 1014 1013 1012 1011 09/23 09/24 09/24 09/25 09/25 09/26 12:00 00:00 12:00 00:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/25/2017 05:36 (EDT)

Barometric Pressure: 1012.4 mb

# NOAA/NOS/CO-OPS 8662245 Oyster Landing (N Inlet Estuary), SC

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 3.0 Feet (MHHW) 2.0 1.0 0.0 -1.0 ä -2.0 Height -3.0 -4.0 -5.0 09/23 09/24 09/24 09/25 09/25 09/26 12:00 12:00 00:00 00:00 00:00 12:00 Predicted Tide (Obs-Pred)

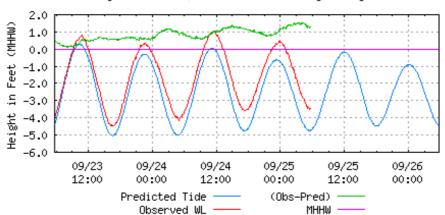
Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -1.87 ft. Predicted: -4.10 ft. Residual: 2.23 ft. Historical Maximum Water Level: Oct 8 2016, 4.64 ft. Next High Tide: 09/25/2017 13:03 (EDT), 0.04 ft.

MHHW

Observed WL

# NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC

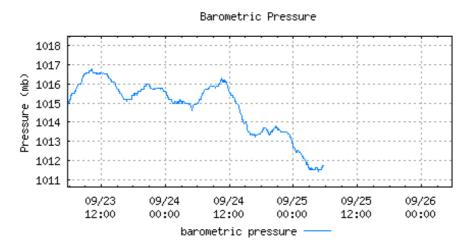
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -3.44 ft. Predicted: -4.73 ft. Residual: 1.29 ft.

Historical Maximum Water Level: Jan 1 1987, 3.65 ft. Next High Tide: 09/25/2017 11:57 (EDT), -0.17 ft.

# NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC

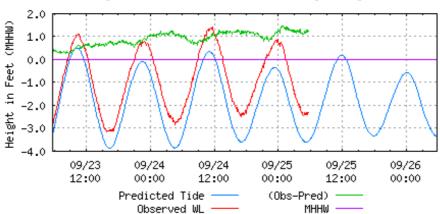


Last Observed Sample: 09/25/2017 05:36 (EDT)

Barometric Pressure: 1011.7 mb

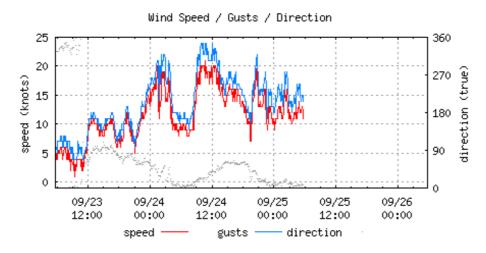
# NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/25/2017 05:42 (EDT). Data relative to MHHW Observed: -2.31 ft. Predicted: -3.55 ft. Residual: 1.24 ft. Historical Maximum Water Level: Oct 4 2015, 2.94 ft. Next High Tide: 09/25/2017 11:50 (EDT), 0.19 ft.

# NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC



Last Observed Sample: 09/25/2017 05:42 (EDT) Wind Speed: 11 knots Gusts: 14 knots Direction: 7° T

### NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

#### Barometric Pressure 1018 1017 Pressure (mb) 1016 1015 1014 1013 1012 1011 09/23 09/24 09/24 09/25 09/25 09/26 12:00 00:00 12:00 00:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/25/2017 05:42 (EDT)
Barometric Pressure: 1011.2 mb

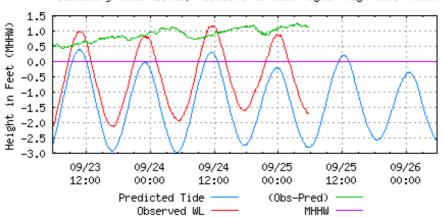
### NOAA/NOS/CO-OPS 8658120 Wilmington, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 2.0 Height in Feet (MHHW) 1.0 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 09/23 09/24 09/24 09/25 09/25 09/26 12:00 00:00 12:00 00:00 00:00 12:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -1.78 ft. Predicted: -3.18 ft. Residual: 1.40 ft. Historical Maximum Water Level: Oct 8 2016, 3.48 ft. Next High Tide: 09/25/2017 14:16 (EDT), -0.16 ft.

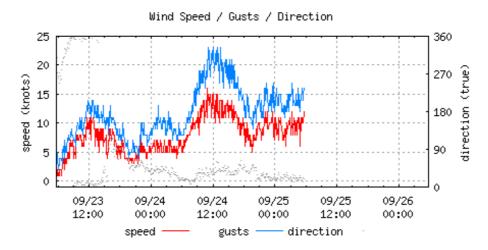
### NOAA/NOS/CO-OPS 8656483 Beaufort, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -1.69 ft. Predicted: -2.81 ft. Residual: 1.12 ft. Historical Maximum Water Level: Sep 14 2005, 3.01 ft. Next High Tide: 09/25/2017 12:15 (EDT), 0.20 ft.

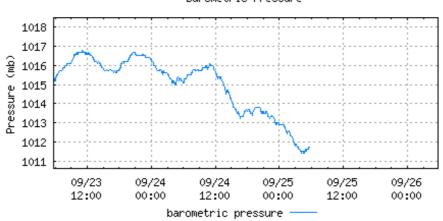
# NOAA/NOS/CO-OPS 8656483 Beaufort, NC



Last Observed Sample: 09/25/2017 05:36 (EDT) Wind Speed: 12 knots Gusts: 16 knots Direction: 20° T

### NOAA/NOS/CO-OPS 8656483 Beaufort, NC

### Barometric Pressure

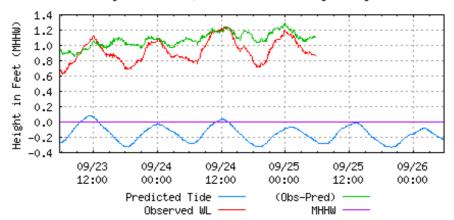


Last Observed Sample: 09/25/2017 05:36 (EDT)

Barometric Pressure: 1011.7 mb

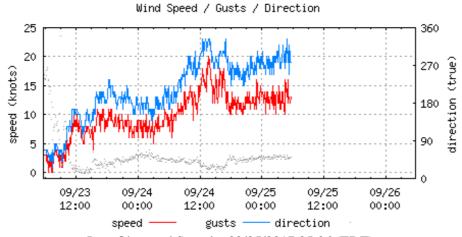
### NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



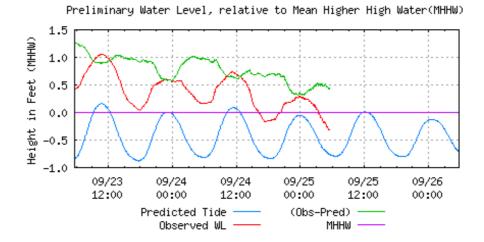
Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: 0.87 ft. Predicted: -0.24 ft. Residual: 1.11 ft. Historical Maximum Water Level: Oct 9 2016, 5.71 ft. Next High Tide: 09/25/2017 13:11 (EDT), -0.01 ft.

## NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC



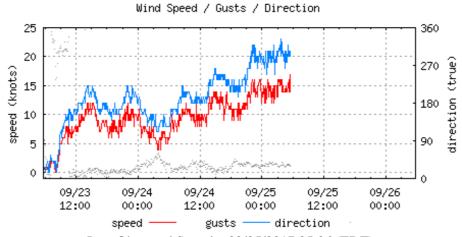
Last Observed Sample: 09/25/2017 05:36 (EDT) Wind Speed: 13 knots Gusts: 19 knots Direction: 51° T

### NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



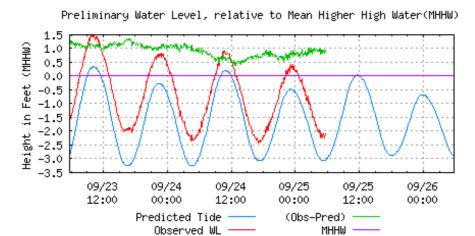
Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -0.34 ft. Predicted: -0.76 ft. Residual: 0.42 ft. Historical Maximum Water Level: Aug 28 2011, 6.32 ft. Next High Tide: 09/25/2017 12:07 (EDT), 0.01 ft.

# NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



Last Observed Sample: 09/25/2017 05:36 (EDT) Wind Speed: 16 knots Gusts: 22 knots Direction: 30° T

### NOAA/NOS/CO-OPS 8651370 Duck, NC



Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -2.11 ft. Predicted: -3.05 ft. Residual: 0.94 ft. Historical Maximum Water Level: Sep 18 2003, 4.13 ft. Next High Tide: 09/25/2017 11:37 (EDT), 0.04 ft.

# NOAA/NOS/CO-OPS 8651370 Duck, NC

Wind Speed / Gusts / Direction 360 25 20 270 direction (true) speed (knots) 15 180 90 5 0 09/23 12:00 09/24 09/26 09/24 09/25 09/25 00:00 12:00 00:00 12:00 00:00 speed gusts -- direction

Last Observed Sample: 09/25/2017 05:36 (EDT) Wind Speed: 19 knots Gusts: 22 knots Direction: 44° T

# NOAA/NOS/CO-OPS 8651370 Duck, NC

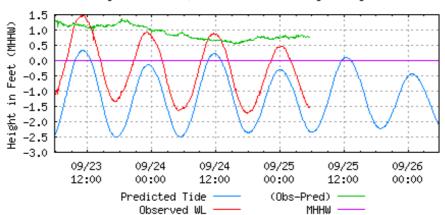
Barometric Pressure 1018 1017 Pressure (mb) 1016 1015 1014 1013 1012 1011 09/23 09/24 09/24 09/25 09/25 09/26 12:00 00:00 12:00 00:00 12:00 00:00 barometric pressure

Last Observed Sample: 09/25/2017 05:36 (EDT)

Barometric Pressure: 1013.7 mb

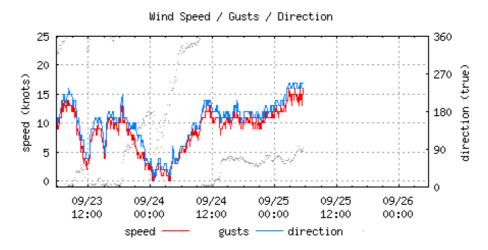
# NOAA/NOS/CO-OPS 8638863 Chesapeake Bay Bridge Tunnel, VA

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/25/2017 05:36 (EDT). Data relative to MHHW Observed: -1.55 ft. Predicted: -2.32 ft. Residual: 0.77 ft. Historical Maximum Water Level: Nov 12 2009, 4.66 ft. Next High Tide: 09/25/2017 12:25 (EDT), 0.10 ft.

# NOAA/NOS/CO-OPS 8638863 Chesapeake Bay Bridge Tunnel, VA



Last Observed Sample: 09/25/2017 05:36 (EDT) Wind Speed: 16 knots Gusts: 17 knots Direction: 85° T

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8665530	Charleston, Cooper River Entrance, SC	09/25/2017 05:36 (EDT)	-3.30 ft	-4.85 ft	1.55 ft	1.11 ft
8662245	Oyster Landing (N Inlet Estuary), SC	09/25/2017 05:36 (EDT)	-1.87 ft	-4.10 ft	2.23 ft	1.17 ft
8661070	Springmaid Pier, SC	09/25/2017 05:36 (EDT)	-3.44 ft	-4.73 ft	1.29 ft	1.06 ft
8658163	Wrightsville Beach, NC	09/25/2017 05:42 (EDT)	-2.31 ft	-3.55 ft	1.24 ft	1.42 ft
8658120	Wilmington, NC	09/25/2017 05:36 (EDT)	-1.78 ft	-3.18 ft	1.40 ft	0.76 ft
8656483	Beaufort, NC	09/25/2017 05:36 (EDT)	-1.69 ft	-2.81 ft	1.12 ft	1.17 ft
8654467	USCG Station Hatteras, NC	09/25/2017 05:36 (EDT)	0.87 ft	-0.24 ft	1.11 ft	1.25 ft
8652587	Oregon Inlet Marina, NC	09/25/2017 05:36 (EDT)	-0.34 ft	-0.76 ft	0.42 ft	0.74 ft
8651370	Duck, NC	09/25/2017 05:36 (EDT)	-2.11 ft	-3.05 ft	0.94 ft	0.92 ft
8638863	Chesapeake Bay Bridge Tunnel, VA	09/25/2017 05:36 (EDT)	-1.55 ft	-2.32 ft	0.77 ft	0.89 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce